

REMARKS

Applicants acknowledge receipt of a Final Office Action dated January 29, 2008. Reconsideration of the present application is respectfully requested in view of the remarks which follow.

I. Status of the Claims

No claims are amended, added, or cancelled. Claims 58-62 and 64 are pending in the application, with claim 58 being the sole independent claim.

II. Rejections Under the Written Description Requirement of 35 U.S.C. § 112, First Paragraph

The sole remaining rejection of claims 58-62 and 64 is under the written description requirement of 35 U.S.C. § 112, first paragraph. *See* Office Action at pages 2-10. All other rejections have been withdrawn. *See* Office Action at page 10. Applicants respectfully traverse.

At page 3 of the Office Action, the PTO states that sufficient distinguishing identifying characteristics of the genus must be provided for "Written Description" as an evidence of possession of the claimed genus. The factors to be considered include disclosure of complete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, or any combination thereof. *Id.* Applicants respectfully submit that they have met this burden.

A. Applicants Have Provided a Genus of Peptides Having Sequence Identity and Homology to SEQ ID NO: 127

Applicants have provided a genus of peptides, many of which show partial sequence identity and homology to SEQ ID NO: 127. Specifically, in addition to the peptide shown in SEQ ID No.: 127, the specification teaches a total of 132 peptides that bind livin- β . For example, Peptide No. 43 of Table 2 (also referred to as peptide 79) has at 19 positions the same amino acid residue as the peptide shown in SEQ ID No: 127, Peptide No. 21 has 17 identical amino acid residues, and Peptide No. 39 has 16 identical amino acid residues. Thus, peptides with even less than 90% identity bind livin- β and are capable of sensitizing cells for apoptosis.

The Examiner states that the claims do not identify which 90% of SEQ ID No.: 127 must be conserved among the variants to bind to livin- β . However, the specification teaches that the amino acids AEIYES, which are the last six carboxyterminal amino acids of most peptides of SEQ ID Nos.: 87-132 (and, thus, which are also present in SEQ ID NO.: 127), can be omitted without losing the functional properties of the respective peptides. See page 4, second paragraph. Accordingly, Applicants teach structural elements which can be eliminated without affecting the claimed functional features.

Therefore, Applicants have described unifying structural features for the claimed genus of peptides.

B. Functional Characteristics Recited in the Claims Correlate with Peptide Structure

The claims recite two functional limitations for peptides being at least 90% identical to SEQ ID NO:127, as the claimed peptides must be capable of (1) binding to livin- β and (2) sensitizing cells for apoptosis. These two functional characteristics correlate with peptide structure. Specifically, the sequence of the peptide according to SEQ ID No.: 127 is given in the specification. Therefore, the person skilled in the art would have known that functional characteristics of peptides which are at least 90% identical to SEQ ID No.: 127 correlate with the function of the peptide having the amino acid sequence shown in SEQ ID No.: 127. Moreover, the specification teaches 132 peptides which bind to livin- β and which sensitize cells for apoptosis. As noted above, the peptides disclosed in the specification have even less than 90% identity to SEQ ID No.: 127, indicating that Applicants actually were in possession of more than the claimed genus.

C. Applicants Teach How to Make and Identify Peptides Within the Claimed Genus

The person skilled in the art needs only to be able to identify peptides which are at least 90% identical to the peptide having the amino acid sequence shown in SEQ ID No.: 127. This can be done without undue experimentation. Specifically, the specification teaches how to identify such peptides at, for example, page 5, third paragraph. The specification describes that the identification can be achieved by contacting peptides with the desired interaction partner (e.g., livin) and selecting those which successfully bind. The Examples given in the

specification describe in detail how to carry out such experiments. Moreover, the specification discloses assays for identifying peptides and sensitizing cells for apoptosis (e.g., by applying the tunnel assay). See page 9, third paragraph.

As Applicants have described unifying structural features for the claimed genus of peptides, which correlate with the two claimed functional limitations, Applicants have satisfied the written description requirement of 35 U.S.C. 112, first paragraph. Accordingly, withdrawal of this ground for rejection is respectfully requested..

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that all of the pending claims are now in condition for allowance. An early notice to this effect is earnestly solicited. If there are any questions regarding the application, the Examiner is invited to contact the undersigned at the number below.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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